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documentclass{article} usepackage{geometry} usepackage{enumitem} usepackage{hyperref}  
usepackage{titlesec} usepackage{parskip} usepackage{fontspec} setmainfont{Arial}  
titleformat{section}{largebfseries}{0em}{} renewcommand{familydefault}{sfdefault}
```

# Arnold Gnanaselvam

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## SUMMARY

Backend software engineer with experience building low-latency microservices ( $\$ < \$100\text{ms p50}$ ) and high-throughput ingestion systems. Proficient in web technologies, with domain expertise in **Payments, Billing, and Idempotency** patterns. Strong focus on Operational Excellence (metrics, dashboards, CI/CD gates). Proven ability to scale systems for 60K+ daily requests and handle production incidents.

## EXPERIENCE

### Synthesis Healthsoft Service & Solutions LLP

June 2024 -- Present

*Junior Software Developer*

Chennai, India

- **Low-Latency Systems:** Designed an indexing microservice serving 60K daily lookups with  $\$ < \$100\text{ms p50}$  latency using caching and composite DB indexes.
- **Performance Optimization:** Reduced API latency by 30%
- **Event-Driven Architecture:** Built a durable ingestion pipeline supporting batching, backpressure, and replay; critical for ensuring data correctness in financial/ledger flows.
- **Operational Excellence:** Defined SLOs, instrumented comprehensive monitoring dashboards, and led incident postmortems to reduce regression frequency.
- **Security & Quality:** Implemented JWT auth and raised team code quality through rigorous PR reviews and automated testing checklists.

## KEY PROJECTS

### Inventory Index & Ingestion System

*Node.js, Redis*

- Engineered a resilient pipeline capable of maintaining  $\$ < \$100\text{ms}$  reads under heavy write loads and node failures.
- Validated system durability and **replay semantics**, ensuring data consistency—a core requirement for transaction processing systems.

### Caching System (P2P)

*C++, TCP/IP*

- Implemented a cache with replication and eventual consistency; validated behavior under network partitions.
- Documented failure modes and recovery strategies.

## TECHNICAL SKILLS

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begin{tabular}{p{0.3linewidth} p{0.65linewidth}} **Languages:** & TypeScript, JavaScript, Node.js, C++

**Core Backend:** & Express.js, RESTful APIs

**Data & Storage:** & PostgreSQL, MySQL, Redis

**Infrastructure:** & Docker, Jenkins

**Domain Knowledge:** & Payments, Idempotency, Retry Patterns, Ledger Consistency

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## ACHIEVEMENTS

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- Improved critical service latency by 30%
- Validated durability of ingestion prototypes under simulated catastrophic failure scenarios.

## EDUCATION

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### B.Sc. Computer Science

Bishop Heber College (2021--2024)

## LEARNING & DEVELOPMENT

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Actively ramping up on high-concurrency services. Studying consensus algorithms.